No. 298 BULLETIN OF THE AGRICULTURAL EXTENSION SERVICE, OHIO STATE UNIVERSITY JUNE, 1948

Egg Cleaning Made Easier

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Fig. 1. The operator sits comfortably. Clean eggs are placed in cases at the operator's left. The abrasive compound on the buffing wheel cleans eggs quickly without breakage.

Cleaning and packing eggs for market, on many farms, requires two to three times the labor required to feed and manage the flock.

Poultry raisers, who market their eggs on the basis of size and quality, know that the shells of eggs must be free from dirt and soiled spots, if they are to bring top pices when graded and marketed.

Proper management by using deep litter, stirred regularly; wire protected roosts; good type nests with the right kind of nesting material; and gathering eggs three to four times daily will substantially reduce the percentage of dirty eggs gathered. Also keeping birds confined during wet weather will materially help in reducing the number of dirty eggs.

Insulated houses that have adequate ventilation during the winter will keep the litter drier and thereby contribute greatly to the production of clean eggs.

THE OHIO STATE UNIVERSITY AND THE U. S. DEPARTMENT OF AGRICULTURE, COOPERATING
AGRICULTURAL EXTENSION SERVICE—H. C. RAMSOWER, DIRECTOR, COLUMBUS, OHIO
Printed and distributed in furtherance of Acts of May 8 and June 30, 1914

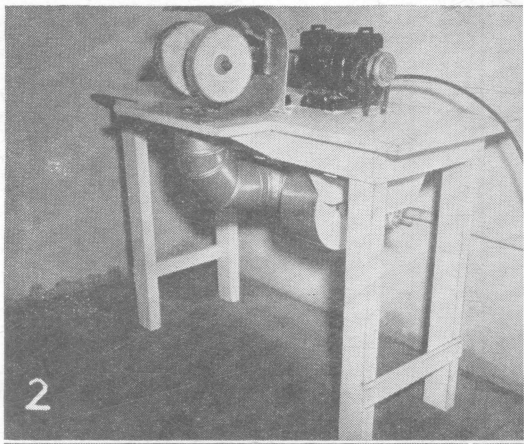
Good nests are desirable. The large community nest, shown in Figure 8, is becoming widely used in many sections of the country. The nest is usually built as shown, 2 feet wide, 8 feet long. It is 14 inches high in front and 30 inches high in back. The door is 16 inches wide and is opened to show inside construction. The bird entrance is 8 inches square. One nest 8 feet long will provide enough nesting space for 80 to 100 birds. It is easy to build, and poultrymen report that dirty eggs are reduced about half with this type of nest when compared to the small individual nest. Shavings or other firm litters are preferable for use in the community nests.

How to Clean the Dirty Eggs

Regardless of management practices some eggs will require cleaning. Eggs, only slightly dirty, can be dry cleaned by using a sandpaper cleaning brush or a cloth buffing wheel dressed with abrasive compound. On large poultry farms, commercially built egg cleaners are successfully used.

The above methods are preferable to washing eggs in water with a cloth or brush because washed eggs tend to deteriorate faster than eggs dry cleaned.

The use of the cloth buffing wheel, attached to a one-quarter horsepower electric motor, is becoming more widely used on Ohio farms. However, unless some provision is made to remove the shell dust, it is irritating to the operator, and deposits a layer of dust over the entire room where the eggs are cleaned. The cleaner shown here has a blower attached to remove the dust from the buffing wheel, and a pipe



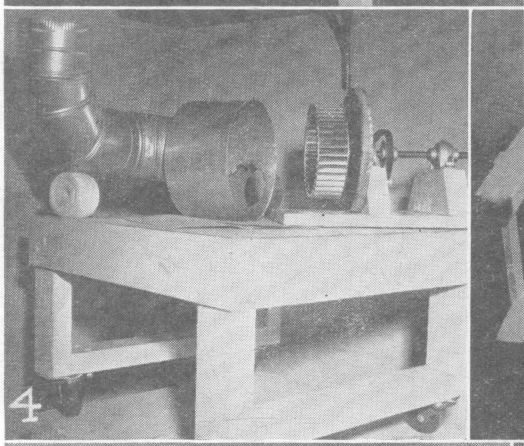
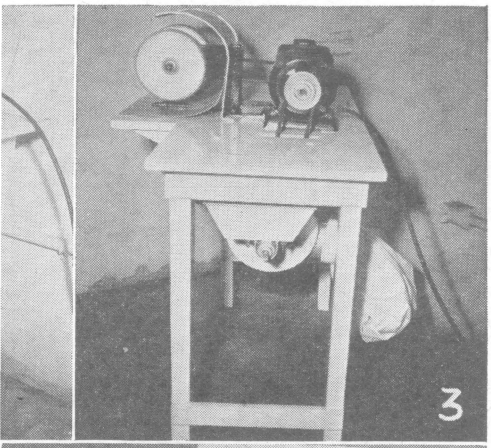


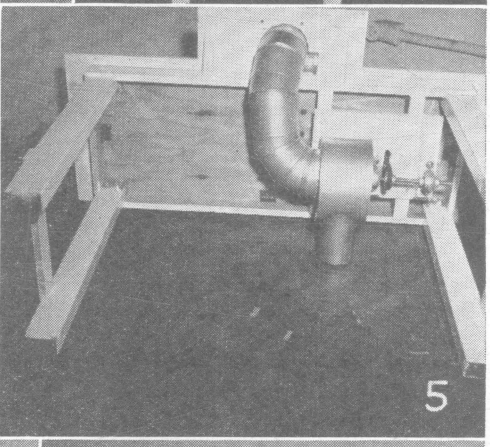
Fig. 2. The table top is 18″ wide, 48″ long, and 31″ high. The offset on which the buffing wheel is mounted, 6″ wide and 18″ long, is located in the center of the table.

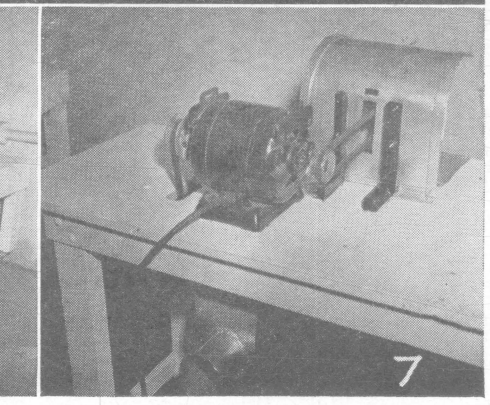
Fig. 3. The end view of the table shows how parts are mounted. Shaft of buffing wheel arbor is 5 inches from front edge of table. Center of motor shaft is 13 inches from arbor shaft.

Fig. 4. Blower parts ready for asser is mounted off center so it lines up with make it easier to mount under table.

Fig. 5. Blower and suction pipe mo blower housing is mounted 13½″ from r is cut in blower base and table top for "







can be run outside to take dust out of the room.

Figure 1 shows the buff wheel type of egg cleaner in operation. The table on which it is mounted, and egg dollies for holding egg cases and baskets, avoid the necessity of lifting egg cases during the cleaning process. The stool for the average operator should be 22 inches above the floor.

Fig. 4 shows the parts of the blower. A 7-inch squirrel cage fan is enclosed in a housing made of an ordinary furnace pipe 9 inches in diameter and 5 inches long. The suction pipe from the buffing wheel to the blower is made of three 5-inch adjustable spouting elbows, and the housing is enclosed on one end with metal to which the elbow suction pipe is soldered to make a tight joint. The fan is set off center in the housing so that the largest volume of air will be at the outlet. The other end is wood. The outlet pipe is 4 inches in diameter, which can be extended to take dust out of the room.

The fan shaft is ½ inch in diameter, 12 inches long, and self-aligning bronze bearings are used. A 2-inch pulley is mounted on the fan shaft and is driven by an adjustable pulley on one end of the motor shaft.

Figure 5 shows how the blower is assembled, including the suction pipe ready for mounting under the table. It is mounted so that there is 4½ inches clearance from the bottom of the table to the blower base. The right end of the blower housing is mounted 13½ inches from the right end of the table.

A double shaft motor is required. The

assembly. 7-inch squirrel cage fan
o with suction pipe. Flexible elbows
le.

pe mounted in place. Right end of
rom right end of table. Slot 1″ x 4″
for "V" belt drive from motor.

Fig. 6. Dollies are 2′ x 2′. Legs are 12″ and caster 3″. Top of dolly to floor is 15″.

Fig. 7. Detail of mounting buffing wheel arbor and shield using 4″ x 7″ L angle iron braces. Shield is mounted 10 inches from front edge of table. Shield is 11 inches long.

blower and buffing wheel arbor are mounted so the belt pulleys attached to the motor shafts will line up, using a straight belt hook up. A 35-inch, V belt is required for the blower.

The 5-inch suction pipe adjustable elbows are set so the end of the suction pipe comes up flush with the top of the table. The hood over the buffing wheel is extended over the opening for the suction pipe. A screen is placed over the opening to prevent eggs going down into the suction pipe, should they be pulled out of the operator's hand.

Figure 7 gives the detail of mounting the buffing wheel arbor (an ordinary bench grinder or buffer arbor is used) by using two L-shaped, angle iron braces. The center of the arbor shaft is 4½ inches above the table. The horizontal distance between the motor and arbor shaft is 13 inches. It is mounted 5 inches from the edge of the table. A 34-inch, V belt is used.

When a double arbor is used, two loose cloth buffing wheels can be attached. The wheels must be allowed to dry after applying the buffing compound. The wheels should be dressed after the day's cleaning is finished. The compound is purchased in a stick, and the end should be kept in a jar with a cloth in the bottom covered with water. This will keep the compound from drying out. It can best be applied by rotating the wheel by hand and ruffing the compound over the surface of the wheel. The cloth buff wheels and abrasive compound can be purchased.

The details of the dollies that are mounted on 3-inch casters are shown in Figure 6. They can be moved easily, even loaded with two cases of eggs.

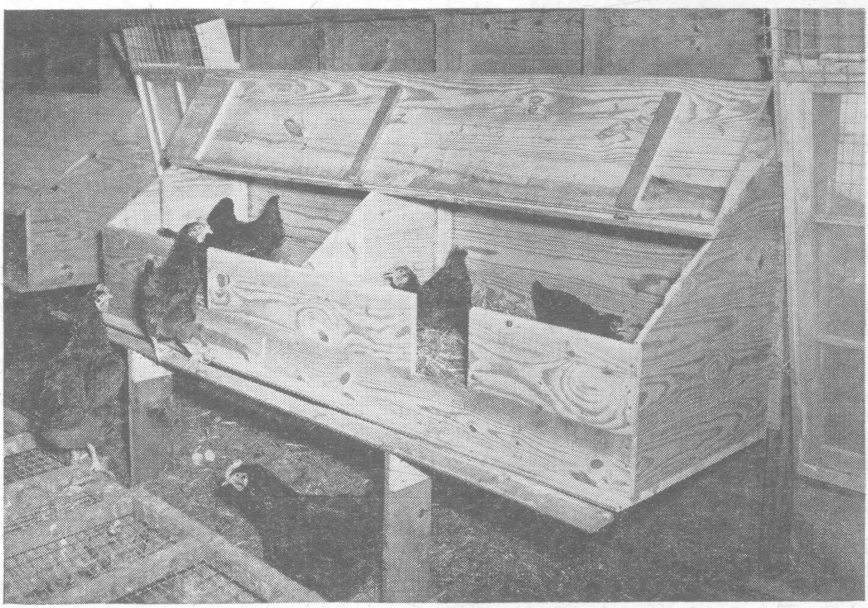


Fig. 8. A nest that reduces egg cleaning and egg breakage. It makes egg gathering easier.